

PATHFINDER

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APRIL 2002

An informal newsletter produced for the GPS user community by Army PM GPS, Fort Monmouth, NJ. Information presented is based on published and submitted news items of interest to the general user. Widest dissemination and reproduction is encouraged. Newsworthy items are solicited for inclusion. Editor Mr. Don Mulligan at PM GPS, Ft Monmouth NJ DSN 992-6137 or (732) 532-6137 or email: Donald.Mulligan@mail1.monmouth.army.mil

The PATHFINDER can be found online at the PM GPS web page: <http://army-gps.robins.af.mil>

PM' Corner

Hello GPS Users!



During the last 6 months, Army reorganization has changed the chain of command for Army PM GPS. We are now aligned under the

Project Manager for Navigation Systems under the Program Executive Office for Intelligence & Electronic Warfare – Sensors or PEO IEW&S for short.

The changes have not affected our ability to support soldiers. We remain committed to fielding the next generation of GPS equipment and to support the GPS equipment now in use.

Personally, I will soon depart the position of Product Manager for Army GPS, a job I have enjoyed greatly for the last three years.

My successor inherits a motivated team dedicated to the soldier. I have immense gratitude for the Joint Program Office staff here in Los Angeles, the Joint Service Support Management Office in Warner Robins Georgia and the all-Army team at Fort Monmouth New Jersey.

A final word of advice: It always pays to practice and remain familiar with your GPS equipment. If you take care of it, and train with it on a regular basis, your GPS equipment will always be ready to provide the situational awareness necessary on the modern battlefield. Hoohah!!



LTC Eveland

Update on the Deferred Maintenance Program for PLGR

In the last several issues we have reported on the Deferred Maintenance Program for the AN/PSN-11 and AN/PSN-11(V1) PLGR. To recap, there are insufficient funds to automatically repair all PLGR damaged outside of warranty coverage. Remember that the warranty for Army and USAF PLGR was extended so PLGR repairs covered by the warranty are being performed promptly. However, due to the funding limitation, a priority repair system is now in place for PLGR damaged outside of warranty coverage, which means “exclusion to warranty” damage.

In the first 90 days (Nov – Feb) of the deferred maintenance program, 884 Army PLGR were deemed exclusions to warranty. Of these, only 350 were placed in the deferred maintenance program.

Some PLGR may be in deferred maintenance for over a year, so owning units were provided letters allowing them to remove the designated serial numbers from their property books and to submit a requisition to B-16 (with special instructions).

It is anticipated that deferred maintenance actions will occur for some time, but it is still important that all non-operational PLGR requiring depot maintenance be turned in for several reasons:

- a. The PLGR may be under warranty and will automatically be replaced. (You can’t go by the warranty expiration date since the warranties were extended and it was impractical to try to issue new stickers).

- b. Your unit may qualify for priority replacement.
- c. Useable parts from PLGR that cannot be repaired may be recovered and used in support of depot level repair.
- d. PLGRs that are no longer serviceable must be demilitarized at the only authorized Depot, which is Rockwell Collins, Inc.
- e. Once funds are available for repair, the replacements will be issued on a first come first serve basis and then another cycle will start.

Do not attempt any unauthorized repair, as this will void the warranty and incur additional costs that will further delay the repair of PLGR in deferred maintenance.

POC Suzanne Reinhardt-Smith at
Fort Monmouth, DSN 992-5758

Army GPS Product Line Update

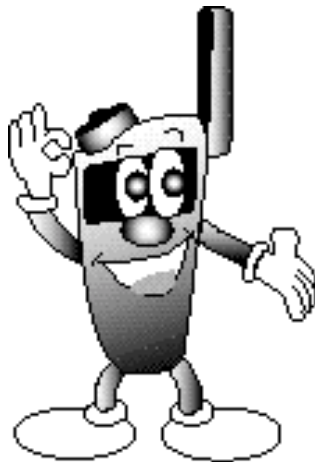
What’s new with the family of authorized military GPS User Equipment?

The Defense Advanced GPS Receiver (DAGR) is the next generation hand-held GPS receiver. DAGR will do everything the PLGR does but with improved technology and reduced size and weight. The DAGR program is managed by Major Keith Hirschman at the Los Angeles office. Technical Sample Test receivers and proposals will be used to evaluate competing DAGR designs this summer in order to select the product best suited to the Army’s need for next-generation handheld GPS. The production contract

will be awarded this Fall and an even tougher round of testing will follow to be sure the DAGR is ready for field use. DAGR fieldings begin in FY04. DAGR will displace the veteran AN/PSN-11(V) Precision Lightweight GPS Receiver (PLGR). However, due to anticipated funding shortfalls, the PLGR will remain in service for years to come. Hopefully most units will have one or the other but not both receivers in order to reduce the training and support burden.

Another new product entering pre-award evaluation this year is the Ground Based GPS Receiver Application Module (GB GRAM). The GB GRAM program is managed by Captain Erik Quigley and 1LT Clay Koschnick at the Los Angeles office. GB GRAM is "GPS on a card" that will allow many different communications, computer and weapons systems to internalize military GPS and discontinue the use of a PLGR connected by cable. The current schedule calls for first production deliveries in 4Q03.

MAJ Hirschman DSN 833-2925 and
CPT Quigley DSN 833-2348



Update on the Rechargeable PLGR Battery Program

CECOM has some good news to share: The new **field rechargeable battery system** consisting of new chargers and enhanced batteries will be available beginning in late 2002! The new chargers (costing about \$1720) will handle all currently fielded rechargeable batteries that are serviced by the current PP-8444 battery charger and they will also charge a host of new batteries.

One of those new batteries will be the BB-2800/U rechargeable battery designed for your PLGR. It is intended to serve as a supplement to your "Go to War" BA-5800 battery and it should be available later this summer

And "yes" if you already have the existing PP-8444 recharging system, you will be able to buy an adapter to fit the new PLGR rechargeable battery (estimated cost of \$44).

The new field rechargeable battery system provides a recharging stand to accommodate a variety of batteries by use of adapter interface plates. The BB-2800/U PLGR battery will cost around \$110.00 each, but over the long term, the repeated use and recharging of the battery will cost less for yearly training than all the throw-away BA-5800s.

We recommend that Supply officers planning their FY03 expenditures budget to purchase the new rechargeable battery system. As soon as the stock number and availability for the recharging system, the PLGR battery and the various adapters are confirmed, CECOM will post that information at the battery website and we will report the information in the next PATHFINDER newsletter.

Visit the Army rechargeable battery website at :
www.monmouth.army.mil/cecom/lrc/lrchq/power/rechargebat.html

POC: Don Brockel at
CECOM Power Sources,
DSN: 992-4948

PLGR Warranty Status

Another reminder: If your PLGR warranty label shows a date that has past, don't believe your eyes! Army and USAF PLGR warranties were extended so you can disregard the expiration date on the label! Don't open the PLGR! Turn it in for repair. Chances are, the damage is covered by the warranty and you'll get a serviceable replacement free of charge.

Note: Marine Corps operators: Continue to send your PLGRs directly to Rockwell Collins Inc as stated in the O&M Manual and expect a replacement sent directly to you from the contractor. The Marine Corps is covering the cost.

Note: Navy operators: Although your PLGR warranty coverage was not extended, the Navy department has provided central funding to pay for all repairs (unless the set is damaged beyond repair). Therefore you can disregard the expiration date on the PLGR warranty label. If you have a faulty or damaged PLGR, turn it in to supply for credit and requisition a replacement through Navy supply. Do not attempt to fix it yourself and do not send it to disposal.

Diana Wright, PLGR Manager,
Warner Robins GA DSN 468-5096

PLGR+96 Software Availability and Restricted Usage

A new "Limited Distribution" version of PLGR software will be available soon. This software, PLGR+96, has been commercially available from Rockwell Collins for some time, but was not authorized for use by U. S. military personnel. The government has now obtained the rights from Rockwell Collins to distribute and use this software but it is only authorized for certain operators.

PLGR+96 software is only authorized for users of the Leica VIPER II Laser Range Finder (LRF) Binoculars. The VIPER system was a special purchase made by the Special Operations Command which means it is not standard issue for US Army forces. VIPER is currently being used for target location. With the special software, PLGR can convert the VIPER's target range and bearing to a Lat-Long reading which is passed to engaging weapon systems. The PLGR+96 software contains a LRF Targeting Module that is tailored for use with the VIPER. This module is the primary difference between the standard US Military issue E-PLGR software (software version 613-9854-003 or 613-9544-008) and PLGR+96 software. Another important distinction about this new software is that it can only be used in PLGR Baseline 3, or above hardware version PLGRs (green PLGRs). Tan PLGRs do not have sufficient memory to operate this software.

What about the users of the other currently authorized laser range finder, the Litton Mark VII LRF? Since the Litton LRF interfaces to PLGR using standard PLGR serial interface waypoint messages, it works with any PLGRs loaded with the standard U.S. Military

issued E-PLGR software. The new PLGR+96 software will be compatible to support the Mark VII LFR but since that range finder was not designed to utilize the targeting module in the PLGR+96 software, you won't get any new capability with the new software.

The US military is considering wider distribution of the PLGR+96 software but for now it is restricted to the users of the VIPER II system as noted above. If and when the decision is made to authorize the use of PLGR+96 software to the general purpose PLGR user, we will be sure to advise you on how and where to obtain it.

In the meantime, for authorized VIPER users, a PLGR TM supplement that addresses PLGR operation with VIPER, Army TM 11-5825-291-13-1 will be available shortly.

Mr. William Burnette, Jr. at
Georgia Field Office, DSN 468-1109

PLGR External Protection Module

In previous issues of the Pathfinder, we've discussed the problems caused by connecting and disconnecting the PLGR from the FBCB2 computer when either or both units are powered on. In addition, there have been articles advising the proper sequence for attaching cables to the PLGR (see the April 2001 newsletter, Vol 8, issue 2, available at the GPS website).

In order to prevent damage to the PLGR or FBCB2, PM GPS has initiated a Materiel Improvement Project to develop a PLGR External Protection Module (EPM). The PLGR EPM will protect the PLGR and the computer it is interfaced to (e.g. FBCB2, Paladin computer) from power transients on the PLGR J2 Interface (data port). The PLGR EPM

may be useful for other PLGR installations where the host platform system needs improved protection from power coming across the PLGR data port.

The PLGR EPM will also possess additional features such as reverse power protection for the external power input, ground incorporated to eliminate the need for the Hoffman Plate, an additional fuse (easily accessible), and a built-in serial port tester to ensure that the data port is operational. The lead-time for production PLGR EPMs is approximately 18 months. Future Pathfinder issues will update you with PLGR EPM status.

Mr. William Burnette, Jr. at
Georgia Field Office, DSN 468-1109

Field User Initiative on Power Distribution

CW2 Robin Boudiette, of Charlie Co. 704th DSB, Fort Hood recently submitted a design proposal for a power distribution box intended to provide a "one stop" connection to provide external power to multiple electronic devices (including PLGR) mounted in communication platforms such as the HMMWV. His design incorporates a single lead from the battery box to a panel that provides safe grounded power. It's a field user initiative that makes sense and it is currently being evaluated by platform engineers at the Army Tank and Automotive Command (TACOM). Kudos to Chief Boudiette for translating his field experience into a Supply & Maintenance Assessment & Review Team (SMART) suggestion. We'll report the results of analysis in a future issue.

You can reach Chief Boudiette at Fort Hood Texas, DSN 738-6824.

Update on HMMWV PLGR installation kits

In the October 2001 issue we reported on the hardware kits and installation instructions developed by AM General Inc, for the US Army Tank & Automotive Command (TACOM) to install PLGR in HMMWV. There are two versions of the kit: 57K3233 for HMMWV weapons carrier variants and 57K3242 for the up-armored M1114 HMMWV. The article noted that there was no kit for the soft-top HMMWV but recommended the use of kit 57K3233 and the antenna bracket (p/n 12460300) from kit 57K3242.

That last recommendation is changed. As it turns out, the bracket from kit 57K3242 doesn't work so well in some cases. TACOM has tasked AM General to develop a third kit specifically intended for soft-top HMMWV. We'll be sure to report on the availability of the PLGR installation kit for soft-top HMMWV in a future issue.

James Buggy at Fort Monmouth,
DSN 992-4733

Does GPS Have Competition?

No, we aren't referring to the map and compass which by the way, will always remain an ESSENTIAL element in your personal navigational skills. By competition we are referring to other satellite-based position location systems. The answer is "yes" there are two competitors on the horizon. The Soviet Union developed a system called GLONASS but it never achieved fully operational status before the government collapsed. In recent years Russia has struggled to get enough funding to revive the GLONASS program but they are still trying. The other competitor just became more likely to see operation. A consortium of European governments is working to

build a GPS system that will be under civil control. (Remember that while our GPS system is used by both civilians and military, it is a military system subject to military control in a national emergency). The civil European system will be called GALILEO. After a long period of consideration, the Council of European Transport Ministers recently agreed to provide initial funding in the amount of about \$745 million. Galileo has a long way to go in terms of technical and operational development so there is no schedule for satellite launches or Initial Operational Capability. For now the Joint GPS Program is still the only game in town. By the way, one of the big differences between GPS and GALILEO is that the Europeans plan to charge a fee to use their system.

Del Crane at Los Angeles,
DSN 833-0595

Our Slice of the Pie!

The recently approved FY2002 Defense budget included money for several elements of the GPS program including (in round figures) \$173 million for new satellites, \$180 million for the Space and Control segments and \$53 million for new User Equipment. That last amount includes the planned purchase of initial DAGR and GB GRAM products for Army users. Nice to be part of a "big budget" project!

Wrong NSN listed in PS Magazine for the PLGR power cable fuse

Oops, we entered the wrong NSN in a recent PS Magazine article about PLGR power cable connections. Please note that the article on page 53 of the January 2002 issue lists the wrong NSN for the fuse cartridge. The correct NSN for the Fuse Cartridge is NSN 5920-00-

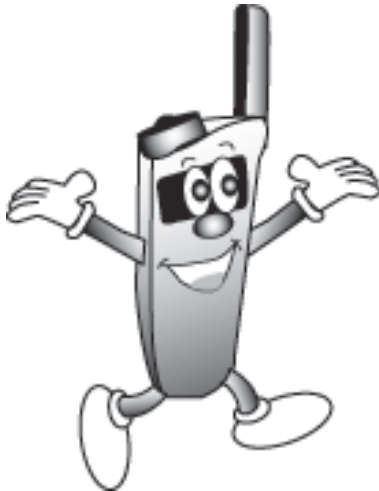
280-4960, which is also listed in the PLGR O&M Manual dated 1 April 2001, Table 9-5, page 9-12.

Don Mulligan at Fort Monmouth,
DSN 992-6137

What's the Current PLGR TM?

The PLGR technical manual was updated last year. The current version carries a publication date of April 2001.

Army TM 11-5825-291-13
USAF TO 31R4-2PSN11-1
USMC PCN 60000282000
Navy EE174-AA-OMI-010/PSN-11



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Georgia Field Office (GFO) for Joint Service
Sustainment: DSN 468-3288 CML (478)
926-3288. Email:
Johnny.Walker@ROBINS.AF.MIL

Or contact the Pathfinder editor via email
address at front of newsletter and we will
route your question to the appropriate office
for response.



Who To Call?

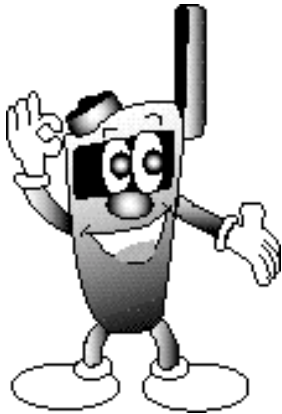
- For GPS integration assistance and new product information, call TMD.
- For sustainment issues including help with software, supply, technical publications, accessory procurement and training call GFO.
- For equipment authorizations, fielding, host vehicle installation and New Equipment Training call RMD.



PLGR PUBLICATIONS

PLGR TM	TM 11-5825-291-13
PLGR Soldiers Guide	TB 11-5825-291-10-2
PLGR Quick Reference Guide	TM 11-5825-291-10
PLGR Made Simple	TB 11-5825-291-10-3

(The PLGR tutorial CD is still in development)



A lot of readers have exercised this option!

We repeat the invitation to convert to “soft” copy distribution!

Not getting the PATHFINDER anymore? Postal authorities at some installations are cracking down on mail that does not have a “complete” street delivery address. As a result, your copy of PATHFINDER might have been returned to us marked “incomplete address.” Without a practical way of reaching you, we can only delete you from our database and hope you resubmit your address.

If you are a deployable military unit, active or reserve, please contact us to provide a complete mailing address so we can resume mailing the newsletter to you! If you prefer to receive the email notice described below, say so!

If you are an installation or TDA activity, a member of AMC, TRADOC or other government organization with an email account, please provide your email account and “PATHFINDER request” in the subject line. We prefer to send email notice to non-deployable readers to reduce the cost of printing and postage. You will receive an email notification when each issue is posted along with the URL link to our website so you can pull down the new issue at your convenience.

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